In The Specification

Rewrite the second paragraph on page 2 as follows:

A first aspect of the invention provides an apparatus for generating outgoing data to be provided on an optical disk ~~as claimed in claim 1~~. A second aspect of the invention provides a method of creating outgoing data to be provided on an optical disk ~~as claimed in claim 19~~. A third aspect of the invention provides an optical disk comprising data in the burst cutting area ~~as claimed in claim 20~~. A fourth aspect of the invention provides an apparatus for manufacturing an optical disc with a burst cutting area ~~as claimed in claim 22~~. A fifth aspect of the invention provides an apparatus for reading an optical disk having a burst cutting area ~~as claimed in claim 26~~. A sixth aspect of the invention provides a method of reading an optical disk having a burst cutting area ~~as claimed in claim 24~~. ~~Advantageous embodiments are defined in the dependent claims.~~

Rewrite from the first paragraph on page 3 thru the first paragraph of page 5, as follows:

In a more preferable embodiment, ~~as defined in claim 4~~, the data processing device and the channel encoder generate the outgoing data having at least a first and a second predetermined repetition frequency when reading out the BCA. The first and the second predetermined repetition frequency are both selected to not coincident with the low frequent component of the barcode frequency spectrum. The low frequent component of the barcode frequency spectrum can be filtered with a band-pass filter if this low frequent component lies in-between the first and second frequencies. If the first and second frequencies are selected higher than the low frequent component a low pass filter suffices. The different frequencies of the data allow encoding data in the BCA. For example, the data may provide an address such that a player knows where

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on the disk it is reading. However, if the same frequency is used in adjacent tracks, it is not possible to perform a reliable tracking.

In another embodiment ~~as defined in claim 5~~, the data processing device supplies data of which the amplitude of the frequency components below a predetermined frequency are substantially smaller than an amplitude of the frequency components above the predetermined frequency. The predetermined frequency is selected above the ground frequency of the markings. The data may have an arbitrary sequence enabling a reliable tracking. The reliable tracking in the BCA may be obtained by using random data. The random data may also be pseudo random data. The random data may comprise a deterministic part which for example indicates the address or a layer number. If a specific layer number is used in the BCA, the detection of this layer number may be used to determine whether information is read in the BCA.

In yet another embodiment ~~as defined in claim 6~~, the data processing device comprises a pre-coder for pre-coding incoming data by replacing data sequences of the incoming data by data sequences of pre-coded data. The outgoing data comprises the data sequences of the pre-coded data having a smaller low frequent content than the corresponding data sequences of the incoming data, a number of bits of a data sequence of the pre-coded data being larger than a number of bits of a corresponding data sequence of the incoming data. The incoming data may be random data if tracking only is relevant. This random data may comprise a deterministic part comprising an address or layer number if it further important to know where the reading of the information from the disk is actually taking place. The incoming data may also be user data. By allowing user data to be written in the BCA the capacity of the disk is increased. The data written in accordance with the invention has suppressed low frequencies to minimally interfere with the markings. However, the conversion of the data to the higher frequencies lowers the data capacity. But, this is not a problem because this only occurs in the BCA.

In ~~an~~ another embodiment ~~as defined in claim 2~~, the data processing device is arranged for converting incoming data to obtain the processed

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data representing the incoming data and having a data frequency spectrum wherein a frequency component interfering with a low frequent component of the bar code stripes is suppressed or not present. In ~~an~~ another embodiment ~~as defined in claim 7~~, the apparatus further comprises a random data generator for generating random data as the incoming data.

In ~~an~~ another embodiment ~~as defined in claim 3~~, the markings comprise a barcode. The barcode is a unique identification of the disk which, for example can be used for copy protection. Preferably, the markings are provided with a laser such that they cannot be removed by a user. The markings may be any other marking than barcodes. For example, letters and numbers may be used. The pitch of the markings should be larger than the pitch of the data to be able to provide the data with frequency components higher than the low frequency components of the markings. The pitch of the data is usually defined by the data pits.

In ~~an~~ another embodiment ~~as defined in claim 7~~, the pre-encoder codes the data sequences 00, 01, 10, 11 of the incoming data into the respective corresponding data sequences 1010, 0001, 0111, 0101 of the pre-coded data. Although the doubling of the data halves the data capacity, the low frequency content is decreased and the detection of the markings is improved.

In ~~an~~ another embodiment ~~as defined in claim 8~~, the pre-encoder codes the data sequence 10 10 of the incoming data into the corresponding data sequence 0000 1000 of the pre-coded data. This decreases the DC content of the outgoing signal.

In ~~an~~ another embodiment ~~as defined in claim 10~~, the channel encoder is a well known 1,7 PP encoder. Such an encoder disclosed in PHQ98.023 and the not yet public System description Blu-ray Disc Rewritable format, part 1, Basic Format Specifications, Version 1.01, July 2003 (further referred to as the Blu-ray disc specification), and serves to minimize the DC content of the data on the disk.

In ~~an~~ another embodiment ~~as defined by claim 14 and 15~~, the input data is given a format such that after pre-encoding ~~with the pre-encoder of claim 16~~ a standard data frame is obtained. With a standard data frame is meant a data frame which has the same format as a data frame in the

user area outside the BCA. This has the advantage that the same channel-encoder can be used inside the BCA as already present for the data outside the BCA.

In ~~an~~ another embodiment ~~as defined in claim 18~~, the 1,7PP encoder is controlled to provide a frame sync signature which is known from the Blu-ray disc specification as FS7. This frame sync signature is not used in the user data area outside the BCA and it's repeatedly occurrence is thus indicative for the BCA. Further, this frame sync signature causes minimal low frequency interferences.